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### REMARKS

This response is intended as a full and complete response to the Office Action mailed June 14, 2006. Please reconsider the claims pending in the application for reasons discussed below.

#### **I. INTERVIEW SUMMARY**

On November 13, 2006, a telephone interview was conducted with the Examiner, Kin-Wah Tong and Chance Hardie. Claim 96 was discussed in view of the rejections in the office action. A potential agreement was reached that amendments as presented herein would likely overcome the § 101 rejections. Further, Applicants discussed the incorporation of the term "multiset" into independent claim 96, as presented in this amendment, with respect to *Thalhammer-Reyero* (U.S. Patent No. 5,980,096). In view of this discussion, the Examiner indicated that further consideration would be required with respect to the § 102 rejections.

#### **II. REJECTIONS UNDER 35 U.S.C. §101**

Claims 32, 33, 96, 98, 100 and 102-107 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter and lacking utility. In response, Applicants respectfully traverse the rejection. Applicants canceled claims 32, 33 and 105-107 without prejudice.

Claim 96, as amended, includes a recitation to "provide an output comprising at least one of: the terminal state or at least one of the alternative resultant states, wherein the output is indicative of at least one of: a change in cell proliferation, a disease prediction, or a drug target identification." As discussed in the interview, this outputting operation provides a tangible result, overcomes the non-statutory subject matter rejection and finds support in the specification at least at page 7, lines 4-5 and the 'User Interfaces' section beginning on page 16. The Examiner further agreed during the interview that inclusion of the uses identified in the Office Action at page 4, lines 17-18 and currently recited in claim 96 will

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likely satisfy the utility requirement under section 101. Accordingly, Applicants respectfully request withdrawal of the rejection and allowance of claims 96, 98, 100 and 102-104.

### III. REJECTIONS UNDER 35 U.S.C. § 112, FIRST PARAGRAPH

Claims 32, 33, 96, 98, 100 and 102-107 stand rejected under 35 U.S.C. § 101 as lacking patentable utility. The Examiner then alleged that one skilled in the art would not know how to use the claimed invention. In response, Applicants respectfully traverse the rejection. Applicants canceled claims 32, 33 and 105-107 without prejudice.

The Examiner premised the lack of enablement on the Examiner's statement that "the claimed invention is not supported by either an asserted utility or a well established utility." However, Applicants submit that the claims as amended contain such utility as discussed above with respect to the § 101 rejection. Therefore, one skilled in the art would know how to use the claimed invention. Accordingly, Applicants respectfully request withdrawal of the rejection and allowance of claims 96, 98, 100 and 102-104.

### IV. REJECTIONS UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

Claims 32 and 33 stand rejected under 35 U.S.C. § 112, second paragraph. In response, Applicants canceled claims 32 and 33, without prejudice. Accordingly, Applicants request withdrawal of the rejection.

### V. REJECTIONS UNDER 35 U.S.C. § 102(b)

Claims 32, 33, 96, 98, 100 and 102-107 stand rejected under 35 U.S.C. § 102(b) as being anticipated by *Thalhammer-Reyero* (U.S. Patent No. 5,980,096). In response, Applicants traverse the rejection. Applicants canceled claims 32, 33 and 105-107 without prejudice.

Claim 96 has been amended to recite that an inference engine receives a *multiset* of symbols. The next to the last full paragraph on page 3 of the specification provides support for the amendment. By definition, a set (see, <http://mathworld.wolfram.com/Set.html>) is a collection of objects in which multiplicity is ignored "unlike a list or multiset." Sets and

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multisets (see, <http://mathworld.wolfram.com/Multiset.html>) thereby represent two distinct mathematical approaches described in the present application for modeling biological systems. As opposed to the claimed multiset, the abstract of *Thalhammer-Reyero* states that for "the current implementation the system comprises libraries of knowledge-based building-blocks that include *sets* (emphasis added) of icons."

Therefore, *Thalhammer-Reyero* does not teach, show or suggest causing a processor to "receive a multiset of symbols in an inference engine," as recited in claim 96. Applicants submit that claim 96 and all claims dependent thereon are not anticipated by *Thalhammer-Reyero* and are allowable. Accordingly, Applicants respectfully request withdrawal of the rejection and allowance of claims 96, 98, 100 and 102-104.

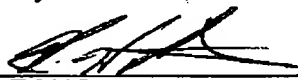
#### VI. CONCLUSION

Applicants submit that all claims now pending are in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issuance are earnestly solicited.

If, however, the Examiner believes that any unresolved issues still exist, it is requested that the Examiner telephone the undersigned at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

Date: November 14, 2006

  
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